

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	1 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION	APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>	PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS	REVIEWED BY	
	DATE	09/17/13

**PERMIT TO CONSTRUCT EVALUATION
(SPRAY STATIONS AND RTO)**

Applicant's Name	BRISTOL FIBERLITE INDUSTRIES, INC.
Company I.D.	111110
Mailing Address	401 E. GOETZ AVE., SANTA ANA, CA 92707
Equipment Address	SAME AS ABOVE

EQUIPMENT DESCRIPTION

Application No. : 554204 (Modification, Previous A/N 454152)

MODIFICATION OF AIR POLLUTION CONTROL SYSTEM UNDER (A/N 454152) CONSISTING OF:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

- 1) FILTER ENCLOSURE BEFORE INLET TO ADSORBER UNIT, 7' - 11" W. X 7' - 11" L. X 3' - 0" H., WITH SIXTEEN 24" X 24" X 4" FARR 30/30 FILTERS.
- 2) FIXED REGENERATIVE CARBON ADSORBER UNIT, SHIP & SHORE, 21' - 0" W. X 12' - 0" L. X 22' - 0" H, 5 BEDS WITH TOTAL 21,000 POUNDS OF ACTIVATED CARBON. (C11)
- 3) THERMAL OXIDIZER, SHIP & SHORE, MODEL NO. SGT0-1K22, 6' - 3" DIA. X 16' - 9" L. NATURAL GAS FIRED BURNER, 1,600,000 BTU/HR HEAT INPUT AND A 2 H.P. COMBUSTION AIR BLOWER. (C12)
- 4) REGENERATIVE CYCLE CONTROLLER.
- 5) WASTE HEAT BOILER.
- 6) SPARK ARRESTOR.
- 7) RESIN SPRAY STATION NO. 1, 10' - 0" W. X 2' - 0" D. X 8' - 0" H., WITH THIRTY 20" X 20" EXHAUST FILTERS. (D4)
- 8) RESIN SPRAY STATION NO. 2, 10' - 0" W. X 2' - 0" D. X 8' - 0" H., WITH THIRTY 20" X 20" EXHAUST FILTERS. (D3)
- 9) RESIN SPRAY STATION NO. 3, 10' - 0" W. X 2' - 0" D. X 8' - 0" H., WITH THIRTY 20" X 20" EXHAUST FILTERS. (D5)

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	2 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION	APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>	PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS	REVIEWED BY	
	DATE	09/17/13

- 10) GELCOAT SPRAY STATION, 10' – 4" W. X 10' – 10" D. X 8' – 5" H., WITH TWENTY-FOUR 20" X 20" EXHAUST FILTERS. (D2)
- 11) EXHAUST SYSTEM CONSISTING OF A PERMANENT TOTAL ENCLOSURE/TUNNEL WITH 60 H.P. BLOWER SERVING RESIN SPRAY STATIONS #1, #2, #3, THE GELCOAT SPRAY STATION AND AN OVEN.

BY THE REPLACEMENT OF:

FIXED REGENERATIVE CARBON ADSORBER UNIT, SHIP & SHORE, 21' – 0" W. X 12' – 0" L. X 22' – 0" H, 5 BEDS WITH TOTAL 21,000 POUNDS OF ACTIVATED CARBON. (C11)

THERMAL OXIDIZER, SHIP & SHORE, MODEL NO. SGT0-1K22, 6' – 3" DIA. X 16' – 9" L. NATURAL GAS FIRED BURNER, 1,600,000 BTU/HR HEAT INPUT AND A 2 H.P. COMBUSTION AIR BLOWER. (C12)

EXHAUST SYSTEM CONSISTING OF A PERMANENT TOTAL ENCLOSURE/TUNNEL WITH 60 H.P. BLOWER SERVING RESIN SPRAY STATIONS #1, #2, #3, GELCOAT SPRAY STATION AND AN OVEN.

WITH

THERMAL OXIDIZER, SHIP & SHORE, MODEL NO. SSE-20K-95X-RTO, 20,000 SCFM, WITH TWO CHAMBERS, A MAXON KINEDIZER LE NATURAL GAS FIRED BURNER OF 4,600,000 BTU/HR HEAT INPUT AND A 15 H.P. COMBUSTION AIR BLOWER. (C16)

EXHAUST SYSTEM CONSISTING OF A PERMANENT TOTAL ENCLOSURE/TUNNEL WITH 100 H.P. BLOWER SERVING RESIN SPRAY STATIONS #1, #2, #3, THE GELCOAT SPRAY STATION AND AN OVEN.

Application No. : 557526 (Admin. Change, Previous A/N 554204)

OVEN, WITH A MAXON, MODEL M-PACKT, 900,000 BTU/HR NATURAL GAS FIRED LOW-NOX BURNER, IN A (PTE) TUNNEL AND ONE 1.5 H.P. COMBUSTION AIR BLOWER. (D6)

Application No. : 554203

Title V Revision

BACKGROUND

The above application was submitted for a permit to modify an existing air pollution control (APC) system. The APC system is currently equipped with an adsorber unit and a thermal oxidizer unit with a 1,600,000 BTU/HR heat input burner. The company is proposing to replace the carbon adsorber unit and thermal oxidizer with a Regenerative Thermal Oxidizer (RTO) with a 4,600,000 BTU/HR heat input burner. An application for the oven was submitted to vent it to this new modified air pollution control system.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	3 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION	APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>	PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS	REVIEWED BY	
	DATE	09/17/13

The applicant uses this VOC abatement equipment to reduce the VOC (styrene) emissions from their “skylight” manufacturing operation. According to the applicant, the carbon adsorber had degraded over the years and was due for replacement. The manufacturer of the APC system thought that a much efficient RTO unit would improve overall function of the APC system. At present, the current APC system provides only about 85.5% overall VOC control efficiency. The proposed RTO system is expected to provide at least 95% VOC control efficiency. However, there will be some increase in the criteria pollutant emissions due to higher natural gas combustion.

The facility operates under a facility-wide VOC emission cap of 264 pounds per day. The applicant has not requested any VOC emission increases from the manufacturing project. The spray booth and the spray stations were originally issued separate permits as shown below, however they were incorporated into one permit unit (air pollution control system). The oven under A/N 519298 (P/O G24093), which is also vented to the APC system, remained a separate permit unit.

The District Rules 1147, 1162 and 1171 apply to this facility. The company uses an air pollution control system to comply with the BACT requirements for the manufacturing operation. The burner was guaranteed to emit <30 ppmv NOx at 3% O2 and expected to comply with the BACT and the R1147 requirements. The district database does not list any notice to comply or notice of violations issued to this facility in the last two years. Also, there were no records of complaints for odor nuisance or visible emissions in the district database in last two years.

This source will be constructed within 1,000 feet from the outer boundary of a school. There will be on-site emission increases due to additional natural gas combustion associated with the new RTO. Thus, a public notice will be required for this project.

This facility is a Title V facility. A renewal Title V permit was issued to this facility on October 14, 2010. The proposed project is considered a “de minimis significant permit revision” to the initial Title V permit, as described in Regulation XXX evaluation.

PROCESS DESCRIPTION

Bristol Fiberlite manufactures translucent skylights for buildings. In a mold, different shapes of domes are formed by fiberglass resin application. In some special orders, molds are coated with gelcoat prior to resin application. All the coating application stations are located in a tunnel. A heated section (oven) in the tunnel cures the parts before the parts leave the tunnel. The styrene emissions from the tunnel are directed to the above described APC system.

This regenerative thermal oxidizer is designed to destroy at least 95% collected VOCs from the contaminated process air. The coatings applied in this process and the clean-up solvents used comply with Rule 1128 and 1171 with adequate control device efficiency.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	4 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION	APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>	PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS	REVIEWED BY	
	DATE	09/17/13

RTO PROCESS & DESIGN

This regenerative thermal oxidizer is capable of processing 20,000 SCFM contaminated air for VOC emission control from the coating lines and mixing tanks. This equipment is designed to destroy at least 95% collected VOCs from the contaminated process air. With the collection efficiency of 100% (Total Permanent Enclosure-PTE), overall VOC control efficiency of 95% is expected from this RTO. The equipment initially is heated to about 1400⁰ F by a burner, which supplies heat to the ceramic media. This media is located in two process zones. The process air gets heated to about 1400⁰ F in the heated beds containing ceramic media. If the incoming air has sufficient concentrations of solvents then it uses VOCs as fuel. The hot air goes to the other process bed and transfers the heat to the ceramic media. The thermal energy recovery is 95% in the heat exchanger. The combustion chamber is purged and the air is directed to the inlet to provide maximum destruction rate. The chambers are alternated continuously.

RTO DESIGN

Total maximum contaminated process flow rate:	18000 scfm
Design capacity of the control equipment:	20000 scfm
Inlet operating temperature	70 ⁰ F
Outlet operating temperature from combustion chamber	1400 ⁰ F (Worst case)
Heat exchanger efficiency:	95%
Heat Input Rating of the burner for initial heating of the media	4.6 mmBTU/HR
Heat required during the normal working load	nil
Volume of the combustion zone	450 ft ³

Heat required to heat air from 70 ⁰F to 1400 ⁰F(worst case)

$$M = 20,000 \text{ scfm} \times 0.075 \text{ lb/scf} \times 60 \text{ min/hr} = 90,000 \text{ lb/hr}$$

$$Cp_{70} = 0.240 \text{ Btu/lb } ^0\text{F} \quad Cp_{1400} = 0.251 \text{ Btu/lb } ^0\text{F} \quad (\text{Table D7, Page 937, AP 40.})$$

$$Cp_{avg} = 0.246 \text{ Btu/lb } ^0\text{F}$$

$$Q = MCp \Delta T$$

$$= 90000 \times 0.246 \times (1500 - 70)$$

$$= 31.66 \text{ MM Btu/hr}$$

After 95% heat recovery

$$Q = 31.66 \times 0.05 = 1.58 \text{ MM Btu/hr}$$

$$\text{Heat input needed: } 1.58 \times 1050/615 = 2.70 \text{ mm BTU/HR. (Table D1, Page 948, AP 40.)}$$

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	5 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION	APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>	PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS	REVIEWED BY	
	DATE	09/17/13

This being a RTO, no excess air is necessary for most of the time during the combustion. Contaminated airflow is sufficient to provide the necessary air. However, two hours are more than sufficient to bring the 1400⁰ F temperature (minimum) for this size of RTO unit. Afterburner will have a burner rated at 4.6 x 10⁶ Btu/hr, which is sufficient to maintain the afterburner temperature. Also, most of the time VOCs provide the necessary fuel to maintain the temperature. The permit condition will require a source test upon completion of the installation, which will prove the design capacity.

Residence time calculation

Total flow rate = 20,000 cfm

Flow rate per minute = 20000 cfm / 60 sec/min = 334 cfs

Corrected volume = 334 cfs x 1860/ 530 = 1172 cfs (1400 °F to 70 °F)

Combustion zone volume = 450 cubic feet

Residence time = 450 / 1172 = 0.38 sec (greater than 0.3 sec recommended - OK)

EMISSION CALCULATIONS

The RTO will be equipped with one low NOx burner. It will take two hours maximum to get the ceramic bed up to temperature (1400 °F). Emissions will be estimated at 30 ppm during the heating cycles. Due to the efficient heat recovery in the ceramic bed, it is anticipated that once the ceramic bed reaches the operating temperature, the heat from the oxidation of the VOCs from the coating operation will maintain the bed temperature. However, for the calculation purposes, it will be assumed that BTU input from the burner will be at 10% of the maximum rating.

AEIS: NOx emissions for 2 hours (to get up to 1400⁰ F temperature) @ 30 ppmv +
NOx emissions for next 22 hours @ 70 ppm @ 10% maximum rating

$$\text{NOx} = 30 \text{ ppm} \times 0.001208 \text{ lb NOx/MM Btu/ppm} \times 4.6 \text{ MM Btu/hr} \times 2 \text{ hrs.} = \underline{\underline{0.33 \text{ lbs}}} +$$

$$30 \text{ ppm} \times 0.001208 \text{ lb NOx/MM Btu/ppm} \times 4.6 \text{ MM Btu/hr} \times 22 \text{ hrs} \times 0.1 = \underline{\underline{0.37 \text{ lbs}}}$$

Average NOx emissions = 0.33 + 0.37 ÷ 24 hr/day = 0.03* lb/hr

* This number will be used to replace the R1 and R2 NOx average emissions on next page.

The maximum emissions will be calculated at 24 hours of burner operation. The new RTO with a burner of 4.6 mm Btu/hr will replace a direct gas-fired afterburner with a burner of 1.6 MM Btu/hr. Hence there will be emission increases as calculated below in the tables.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT STATIONARY SOURCE AND COMPLIANCE DIVISION <i>Large Coating, Printing and Chemical Operations Team</i> APPLICATION PROCESSING AND CALCULATIONS	PAGE	6 of 12
	APP. NUMBER	554204
	PROCESSED BY	SMP
	REVIEWED BY	
	DATE	09/17/13

COMBUSTION EMISSIONS FROM THE NEW RTO

A/N 554204

Ship & Shore RTO

@

	<u>maximum</u>	<u>normal</u>		
<u>hr/dy</u>	24	2	<u>max heat input</u>	4.60E+06 (BTU/hr)
<u>dy/wk</u>	7	7	<u>gross heating value</u>	1050 (BTU/scf)
<u>wk/yr</u>	50	50		
<u>load</u>	100%	100%		

	Emission	MAX	AVE	MAX	30-DAY	MAX	MAX
	<u>Factors</u>	(lb/hr)	(lb/hr)	(lb/dy)	(lb/dy)	(lb/yr)	(ton/yr)
SO ₂ (R1)	0.83	0.004	0.004	0.087	NA	31	0.015
SO ₂ (R2)	0.83	0.004	0.004	0.087	0.087	31	0.015
NO ₂ (R1)	38.9	0.170	0.170	4.090	NA	1,432	0.716
NO ₂ (R2)	38.9	0.170	0.170	4.090	4.090	1,432	0.716
CO (R1)	39.5	0.173	0.173	4.153	NA	1,454	0.727
CO (R2)	39.5	0.173	0.173	4.153	4.153	1,454	0.727
N ₂ O (R1)	2.2	0.010	0.010	0.231	NA	81	0.040
N ₂ O (R2)	2.2	0.010	0.010	0.231	0.231	81	0.040
PM, PM ₁₀ (R1=R2)	7.5	0.033	0.033	0.789	0.789	276	0.138
CO ₂ (R1=R2)	0.000012	0.000	0.000	0.000	0.000	0	0.000
TOC(R1=R2)	7	0.031	0.031	0.736	0.736	258	0.129
ethyl benzene	0.0095	4.2E-05	4.2E-05	1.0E-03	NA	3.50E-1	1.75E-4
acetaldehyde	0.0043	1.9E-05	1.9E-05	4.5E-04	NA	1.58E-1	7.91E-5
acrolein	0.0027	1.2E-05	1.2E-05	2.8E-04	NA	9.94E-2	4.97E-5
benzene	0.008	3.5E-05	3.5E-05	8.4E-04	NA	2.94E-1	1.47E-4
formaldehyde	0.017	7.4E-05	7.4E-05	1.8E-03	NA	6.26E-1	3.13E-4
naphthalene	0.0003	1.3E-06	1.3E-06	3.2E-05	NA	1.10E-2	5.52E-6
PAH's	0.0001	4.4E-07	4.4E-07	1.1E-05	NA	3.68E-3	1.84E-6
toluene	0.0366	1.6E-04	1.6E-04	3.8E-03	NA	1.35E+0	6.73E-4
xylene	0.0272	1.2E-04	1.2E-04	2.9E-03	NA	1.00E+0	5.00E-4

NO ₂ @ 3% excess O ₂ ----->>	29.97	(ppmv)	SO ₂ @ 3% excess O ₂ ----->>	0.46	(ppmv)
CO @ 3% excess O ₂ ----->>	49.98	(ppmv)	PM @ 12% CO ₂ ----->>	5.5E-09	(grain/ft ³)

Ver. 1.3

COMBUSTION EMISSIONS FROM THE EXISTING AFTERBURNER

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT			PAGE	7 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION			APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>			PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS			REVIEWED BY	
			DATE	09/17/13

A/N 454152

Ship & Shore Afterburner

@

	<u>maximum</u>	<u>normal</u>		
<u>hr/dy</u>	24	2	<u>max heat input</u>	1.60E+06 (BTU/hr)
<u>dy/wk</u>	7	7	<u>gross heating value</u>	1050 (BTU/scf)
<u>wk/yr</u>	50	50		
<u>load</u>	100%	100%		

	<u>Emission</u>	MAX	AVE	MAX	30-DAY	MAX	MAX
	<u>Factors</u>	(lb/hr)	(lb/hr)	(lb/dy)	(lb/dy)	(lb/yr)	(ton/yr)
SO ₂ (R1)	0.83	0.001	0.001	0.030	NA	11	0.005
SO ₂ (R2)	0.83	0.001	0.001	0.030	0.030	11	0.005
NO ₂ (R1)	130	0.198	0.198	4.754	NA	1,664	0.832
NO ₂ (R2)	130	0.198	0.198	4.754	4.754	1,664	0.832
CO (R1)	35	0.053	0.053	1.280	NA	448	0.224
CO (R2)	35	0.053	0.053	1.280	1.280	448	0.224
N ₂ O (R1)	2.2	0.003	0.003	0.080	NA	28	0.014
N ₂ O (R2)	2.2	0.003	0.003	0.080	0.080	28	0.014
PM, PM ₁₀ (R1=R2)	7.5	0.011	0.011	0.274	0.274	96	0.048
CO ₂ (R1=R2)	0.000012	0.000	0.000	0.000	0.000	0	0.000
TOC(R1=R2)	7	0.011	0.011	0.256	0.256	90	0.045
ethyl benzene	0.0095	1.4E-05	1.4E-05	3.5E-04	NA	1.22E-1	6.08E-5
acetaldehyde	0.0043	6.6E-06	6.6E-06	1.6E-04	NA	5.50E-2	2.75E-5
acrolein	0.0027	4.1E-06	4.1E-06	9.9E-05	NA	3.46E-2	1.73E-5
benzene	0.008	1.2E-05	1.2E-05	2.9E-04	NA	1.02E-1	5.12E-5
formaldehyde	0.017	2.6E-05	2.6E-05	6.2E-04	NA	2.18E-1	1.09E-4
naphthalene	0.0003	4.6E-07	4.6E-07	1.1E-05	NA	3.84E-3	1.92E-6
PAH's	0.0001	1.5E-07	1.5E-07	3.7E-06	NA	1.28E-3	6.40E-7
toluene	0.0366	5.6E-05	5.6E-05	1.3E-03	NA	4.68E-1	2.34E-4
xylene	0.0272	4.1E-05	4.1E-05	9.9E-04	NA	3.48E-1	1.74E-4

NO ₂ @ 3% excess O ₂ ----->>	100.16	(ppmv)	SO ₂ @ 3% excess O ₂ ----->>	0.46	(ppmv)
CO @ 3% excess O ₂ ----->>	44.29	(ppmv)	PM @ 12% CO ₂ ----->>	5.5E-09	(grain/ft ³)

Ver. 1.3

The following Table summarizes the emission changes from the proposed replacement project.

Application	NOx emissions Lbs/day	CO Emissions Lbs/day	VOC Emissions Lbs/day	PM10 Emissions Lbs/day	SOx Emissions Lbs/day
554204	4.09	4.15	0.74	0.79	0.09
454152	4.75	1.28	0.26	0.27	0.03
Change	-0.66	+2.87	+0.48	+0.52	+0.06

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT STATIONARY SOURCE AND COMPLIANCE DIVISION <i>Large Coating, Printing and Chemical Operations Team</i> APPLICATION PROCESSING AND CALCULATIONS	PAGE	8 of 12
	APP. NUMBER	554204
	PROCESSED BY	SMP
	REVIEWED BY	
	DATE	09/17/13

Toxic Emissions:

There will not be any toxic emission increase from the manufacturing process. There will be increase in the toxic emissions from the additional natural gas combustion. A Tier 2 Risk Assessment was calculated from the increase in combustion of 3.0 mm Btu/hr natural gas from this replacement project. The assessment calculated a cancer risk of 0.406 in a million (4.06E-07) for the residential receptor and 0.043 in a million (4.30E-08) for a commercial receptor. The HIA and HIC were <1. Thus, the Tier 2 risk assessment demonstrated compliance with the Rule 1401 requirements.

Green House Gas (GHG) Emissions:

CO₂ Emissions: 116.89 lb/MMBtu X 4.6 MMBtu = 537.7 lb/hr

CH₄ Emissions: 0.002 lb/MMBtu X 4.6 MMBtu = 0.0092 lb/hr

N₂O Emissions: 0.0002 lb/MMBtu X 4.6 MMBtu = 0.00092 lb/hr

Application No. 557526 (Oven):

This is an administrative change application. Hence all the previous application emission data will be re-entered in the NSR. The following Green House Gas (GHG) emissions will be added to the previous emission data.

CO₂ Emissions: 116.89 lb/MMBtu X 0.9 MMBtu = 105.2 lb/hr

CH₄ Emissions: 0.002 lb/MMBtu X 0.9 MMBtu = 0.0018 lb/hr

N₂O Emissions: 0.0002 lb/MMBtu X 0.9 MMBtu = 0.00018 lb/hr

RULES/REGULATION COMPLIANCE

▣RULE 212, PUBLIC NOTIFICATION

√SECTION 212(c)(1):

This section requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school. This source is located within 1,000 feet from the outer boundary of a school. Therefore, a public notice will be required by this section.

√ SECTION 212(c)(2):

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	9 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION	APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>	PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS	REVIEWED BY	
	DATE	09/17/13

This section requires a public notice for all new or modified facilities which have on-site emission increases exceeding any of the daily maximums as specified in subdivision (g). As shown in the following table, the emission increases from this project are below the daily maximum limits specified by Rule 212(g). Therefore, this application will not be subject to this section.

LB/DAY	CO	NOX	PM₁₀	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	2.87	-0.66	0.52	0.48	0	0.06

√ **SECTION 212(c)(3):**

The cancer risk assessment calculations indicated less than 1 in a million (0.406 in a million for the residential receptor and 0.043 in a million for a commercial receptor). Therefore, this application will not be subject to this section.

√ **SECTION 212(g):**

This section requires a public notice for all new or modified sources which undergo construction or modifications resulting in an emission increases exceeding any of the daily maximum specified in the table below. As shown in the following table, the emission increases from this project are below the daily maximum limits. Therefore, public notice will not be required by this section.

LB/DAY	CO	NOX	PM₁₀	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	2.87	-0.66	0.52	0.48	0	0.06

▣ **RULES 401 & 402, VISIBLE EMISSIONS & NUISANCE**

Compliance with these rules is expected with the proper operation of the equipment. The District database did not show any records of complaints against this facility for nuisance or visible emissions.

▣ **RULES 404 & 405, PARTICULATE MATTER CONCENTRATION& WEIGHT**

Compliance with these provisions is expected with proper operation of the equipment.

▣ **RULES 404 & 405, PARTICULATE MATTER CONCENTRATION& WEIGHT**

Compliance with these provisions is expected with proper operation and maintenance of the equipment.

▣ **RULE 481, SPRAY COATING OPERATIONS**

√ **SECTION (a)**

The use of airless chopper guns and hand lay-up is in compliance with these requirements.

▣ **RULE 1147, NO_x REDUCTIONS FROM MISCELLANEOUS SOURCES**

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	10 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION	APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>	PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS	REVIEWED BY	
	DATE	09/17/13

The manufacturer of the equipment has guaranteed <30 ppmv NO_x emission at 3% O₂ from the RTO burner. The source test requirement will prove compliance with the rule requirements.

▣ **RULE 1162, POLYESTER RESIN OPERATIONS**

▼ **SECTION (c)(1), MONOMER CONTENT OF RESINS AND GELCOATS**

The materials used in the facility comply with these requirements, per following information provided by the facility in the past.

Material	% styrene per R1162	Actual styrene content
Fire Retardant Resin # LB1043-02 (Ashland)	38	28.9
Fire Retardant Resin # LB1043-11 (Ashland)	38	29.0
Bonding Resin-Tooling #1042-15 (Ashland)	40	40.0
Specialty Gelcoat (Valspar)	48	45.0
Specialty Gelcoat (Valspar)	48	45.0

▼ **SECTION (c)(2), TRANSFER EFFICIENCY**

The use of non-atomized gun and hand lay-up is in compliance with these requirements.

▣ **RULE 1171, SOLVENT CLEANING OPERATIONS**

The use of acetone, an exempt VOC compound, demonstrates compliance with these provisions.

REGULATION XIII

▣ **RULE 1303(a), BEST AVAILABLE CONTROL TECHNOLOGY (BACT)**

(a) VOC EMISSIONS

The installation and operation of air pollution control system with 100% collection and 95% oxidizer destruction efficiency complies with the BACT requirements.

(b) PM₁₀ EMISSIONS

The use of 2" thick filters satisfies BACT requirement for PM₁₀ emissions.

▣ **RULE 1303(b)(1), MODELING**

No detailed modeling analysis is required due to less than 0.41 lbs/hr PM₁₀ emissions and combustion emissions from the thermal oxidizer are below Table A-1 levels for < 5 mmBTU/HR.

Emissions/hr	NO _x	CO	PM ₁₀
Actual	0.17	0.173	0.052
Allowed	0.20	11.0	1.27

▣ **RULE 1303 (b)(2), EMISSION OFFSETS**

There is no emission increase in VOC from the coating usage due to this modification. Hence, no VOC offsets are required. Combustion emission increases from the RTO replacement project are exempt from offsets under Rule 1304(c)(4) – Regulatory Compliance.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	11 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION	APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>	PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS	REVIEWED BY	
	DATE	09/17/13

▣ **RULE 1401, NEW SOURCE REVIEW OF CARCINOGENIC/TOXIC AIR CONTAMINANTS**

As discussed in the above report, this project is expected to comply with these rule requirements.

▣ **RULE 40 CFR63 SUBPART WWW**

The company meets the organic HAP emission standards of the rule for less than 100 tons per year facility. However, with the proposed modification, the Facility will comply with this regulation by operating the coating operations within a PTE and have a air pollution control system with at least 95% overall organic HAP control efficiency. Compliance with this regulation is expected.

REGULATION XXX

The proposed project is considered as a “de minimis significant permit revision” to the initial Title V permit issued to this facility I January 2010. Rule 3000(b)(6) defines a “de minimis significant permit revision” as any Title V permit revision where the cumulative emission increases on non-RECLAIM pollutants or hazardous air pollutants (HAP) from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	Daily Maximum (lbs/day)
HAP	30
VOC	30
NO _x	40
PM ₁₀	30
SO _x	60
CO	220

Rule 3003(j) specifies that a proposed permit for the initial Title V permit shall be submitted to EPA for review. To determine if a project qualifies for a “de minimis significant permit revision”, emission increases resulting from all permit revisions that are made after the submittal of proposed permit to EPA shall be accumulated and compared to the above threshold levels. This is the third permit revision to the Title V Permit. The cumulative emission increases resulting from this proposed permit revision are summarized as follows:

Revision	HAP	VOC	NO_x	PM₁₀	SO_x	CO
1 st Permit Revision, modification of adsorber unit (A/N 454152)	0	0	0	0	0	0
2 nd Permit Revision, modification of APC system (A/N 554204)	0	0.480	-66	0.52	0.06	2.87
Cumulative Total	0	0.480	-66	0.52	0.06	2.87
Maximum Daily	30	30	40	30	60	220

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	12 of 12
STATIONARY SOURCE AND COMPLIANCE DIVISION	APP. NUMBER	554204
<i>Large Coating, Printing and Chemical Operations Team</i>	PROCESSED BY	SMP
APPLICATION PROCESSING AND CALCULATIONS	REVIEWED BY	
	DATE	09/17/13

CONCLUSIONS/RECOMMENDATIONS

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a “de minimis significant permit revision”, it is exempt from the public participation requirements under Rule 3006 (b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j) in conjunction with the Rule 212 public notice. If EPA does not raise any objections within the review period and upon completion of the Rule 212 public notice period, a revised Title V permit will be issued to this facility.